13)

113201
Shaughnessey No.

Initiated: 5-5-85
by E. Zucker

EEB Chemical Profile

Trade names:
✓ Ronilan
✓ Formalin
✓ Vorlan
Bas 352 04 F

Ronilan (Vinclozolin) ✓

100.1 Minimum Requirements

100.1.1 Avian Acute Oral LD50

SPECIES	TEST MATERIAL	RESULTS	CATEGORY	REFERENCE
Bobwhite Quail	96.5%	LD50 > 2510 mg/kg	Core	Fink 1978

100.1.2 Avian Dietary LC50

SPECIES	TEST MATERIAL	RESULTS	CATEGORY	REFERENCE
Bobwhite	96.5%	LC50 > 5620 ppm	Core	Fink 1978
Mallard	96.5%	LC50 > 5629 ppm	Core	Fink 1978

100.1.3 Fish Acute LC50 (96 hour)

SPECIES	TEST MATERIAL	RESULTS	CATEGORY	REFERENCE
Bluegill sunfish	96.5%	LC50 = 47.3 mg/1 (95% 37.1-60.3)	Supple.[1]	Calmbacher 1978
Rainbow Trout	96.5%	LC50 > 18 mg/1	Supple.[1]	Calmbacher 1978
Pumpkinseed Lepomis gibbosus	96.5%	LC50 = 49.8 mg/1	Unknown[1]	Gelbke 1980

SPECIES	TM	RESULTS	AUTHOR	ACC#	CATEGORY
Lepomis gibbosus	97%	LC50>3.4 ppm	Gelbke & Munk	264302	Core
Rainbow trout	97%	LC50>2.84 ppm	Gelbke & Munk	264302	~~Core~~ Suppl. Test Temp too high
Lepomis gibbosus	50%	LC50>68<100	Gelbke & Munk	264302	Suppl*

DR 11-7-85

* Test solution was aerated, precipitate formed, test levels not measured.

Rainbow trout 50% LC50 > 13.6 ppm Gelbke & Munk 1980 264302 Suppl. Test Temp too high DR 11-8-

100.1.4 Aquatic Invertebrate LC50

SPECIES	TEST MATERIAL	RESULTS	CATEGORY	REFERENCE
Daphnia magna	96.5%	LC50 = 3.65 mg/1 NOEL = 1.0 mg/1	Core[2]	Union Carbide 1978

2 No precipitate was reported for this study, however considering the the solubility problems encountered in testing fish and the low water solubility of the compound, results of this study should be viewed with caution

100.2 Additional Terrestrial Laboratory Tests

100.2.1 Avian Reproduction Studies

The reproduction study on mallards indicated that reproduction may be affected at exposure levels between 5 and 50 ppm. At 50 ppm, mallard fertility rate was significantly reduced.

The reproduction study on bobwhite quail indicated that reproduction was not significantly affected at dietary levels of 5 and 50 ppm. Treatment groups did exhibit a decrease in fertility as compared to controls, however the reduction was not statistically significant $p < 0.05$.

These 2 studies are categorized as Core (EEB Review Out: May 24, 1982 by J. Tice), however data were quite variable. The Canadian Wildlife Service has found evidence that Ronilan affects avian testicular development (Memo from R. Balcomb; August 1984) thus the fertility data should be pertinent until otherwise indicated.

101 General Toxiciology

Toxicology Branch one-liners are appended.

102 Physical and Chemical Properties

102.1 Chemical Name

3-(3,5-dichlorophenyl)-5-ethenyl-5-methyl-2,4-oxazolidinedione

102.2 Structural Formula

102.3 Common Name

Vinclozolin

102.4 Trade Names

Ronilan
Ornalin

102.5 Molecular Weight

286.1

102.6 Physical State

White solid

102.7 Properties

102.7.1 Solubility
(From EEB Review out March 25, 1980, by S. Creeger)

g/100 g solvent

water -	<0.1
ethanol -	1.4
acetone -	43.5
ethylacetate -	25.3
cyclohexane -	0.9
ether -	6.3
benzene -	14.6
chloroform -	31.9

102.7.2 Octanol/water partition coefficient

1000 at 22 $\pm$ 2° C